

**Operating Instructions
for
Flow Indicator**

Model: DAZ



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2. Note

Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.

The instruction manuals on our website www.kobold.com are always for currently manufactured version of our products. Due to technical changes, the instruction manuals available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email (info.de@kobold.com) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form against an applicable postage fee.

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EC-machine guidelines.

as per PED 2014/68/EU

In acc. with Article 4 Paragraph (3), "Sound Engineering Practice", of the PED 2014/68/EU no CE mark.

3. Instrument Inspection

Instruments are inspected before shipping and sent out in perfect condition.

Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

Scope of delivery:

The standard delivery includes:

- Flow Indicator model: DAZ

4. Regulation Use

Any use of the Flow indicator, model: DAZ, which exceeds the manufacturer's specification, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

5. Operating Principle

The KOBOLD-Flow indicator with Flap Model DAZ was developed to coverage the flow quantity. The position of the flap regarding to the flow scale ensure the flow value. These instruments are useable for horizontal or vertical installation (flow direction from bottom to top).

6. Mechanical Connection

Before installation:



Please ensure that the actual flow-volume is in agreement with the measuring range of the unit. The measuring range can be read from the model label.

Make sure that the permitted max. operating pressure and temperature of the device are not violated. Remove all the transportation-safety locks etc. and ensure that there exist no packing-material parts inside the unit.

Additional inlet and outlet lengths are not necessary but recommended. The sealing of connection screw joints is succeeded through PTFE tape or similar material.

During installation of the unit, attention must be paid to see that no high pressure or tensile loads exert on the connection screw joints

We recommend fastening an inlet and outlet pipe mechanically at a distance of approx. 50 mm from the connection screw joint. If possible, after mechanical installation, check whether the sealing of connection-joints/piping is adequate



Note! Flush the pipe system before fitting.

Note! Carry out sealing when fitting.

Note! Note direction of flow; if fitting orientation is defined, then carry out fitting appropriately.



Attention! Note operating pressure, pressure level and temperature range.



Note! Ensure no stress is produced when fitting.

Attention! Only use the device for a medium specified.



Bleed the system before putting into operation.

Attention! Thermal expansion of the pipework must be taken by compensators.

Note! The device must not be used as the fixed point when compensating with compensators.



Note! Do not exceed max. flow rate. The functional value of the switching range is always related to the reducing flow (protection against defects).

Note! The system pressure must lie above the value of the arising pressure loss.

Note! Invert installation orientation only with clean media.



Attention! Avoid pressure shocks and excess deflections on the measurement systems.



NOTE! 5x diam. as smoothing section on inlet and outlet

NOTE! Use dirt trap with heavily contaminated media.



CAUTION! In the case of measurement substances loaded with ferritic material, we recommended the installation of Magnetic Filter.

7. Commissioning

In order to avoid pressure peaks, the flow medium should flow slowly into the device



Note! Pressure peaks by sudden flowing, caused by single solenoid valves, ball valves or the like, can lead to the destruction of the device (water hammer!). In the operating condition, it is to be made certain that the unit is constantly filled with the medium.

Larger bubbles in the measuring chamber can lead to measurement errors.

8. Maintenance

In case, the medium to be measured is not contaminated, the unit is maintenance-free.

9. Technical Information

Materials

Housing:	red cast iron
Rings:	brass
Window:	glass
Seals:	Klingersil C 4400
Flap:	stainless steel 1.4310 polished
Axle:	stainless steel 1.4305
Scale panel:	stainless steel 1.4310
t _{max} (water):	100 °C
t _{max} (oil):	200 °C
p _{max} :	16 bar

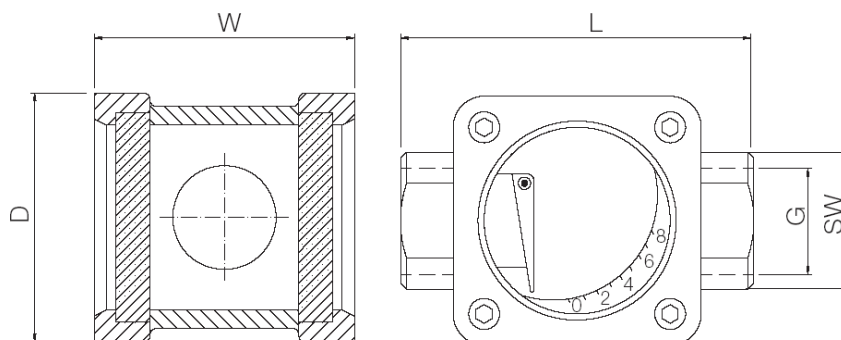
10. Order Codes

Example: **DAZ-1101HR15**

Indication range [L/min] water	Q _{max} [L/min] water	Δ P [bar] at Q _{max}	Model*	G*
2.1 - 17	25	0.9	DAZ-1102HR20	G 1/2
2.1 - 20	45	0.9	DAZ-1101HR15	G 3/4
2.1 - 24	65	0.9	DAZ-1103HR25	G 1

* For NPT-thread replace „R“ in model code by „N“

11. Dimensions



Deflection	Connection 1/2" [L/min]	Connection 3/4" [L/min]	Connection 1" [L/min]
1	2.1	2.1	2.1
2	3.2	3.2	4.0
3	3.8	4.5	5.0
4	4.3	5.2	7.0
5	4.7	5.6	7.8
6	5.0	6.3	9.2
7	5.7	7.5	11.1
8	7.5	8.9	14.0
9	9.5	11.6	17.8
10	17.0	20.0	24.0

Model*	L [mm]	W [mm]	D [mm]	AF [mm]	Weight [kg]
DAZ-1102HR20	85	68	60	36	1.2
DAZ-1101HR15	85	68	60	36	1.1
DAZ-1103HR25	95	74	60	42	1.25

* same dimensions for NPT-model

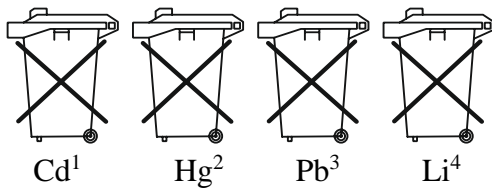
12. Disposal

Note!

- Avoid environmental damage caused by media-contaminated parts
- Dispose of the device and packaging in an environmentally friendly manner
- Comply with applicable national and international disposal regulations and environmental regulations.

Batteries

Batteries containing pollutants are marked with a sign consisting of a crossed-out garbage can and the chemical symbol (Cd, Hg, Li or Pb) of the heavy metal that is decisive for the classification as containing pollutants:



1. „Cd" stands for cadmium
2. „Hg" stands for mercury
3. „Pb" stands for lead
4. „Li" stands for lithium

Electrical and electronic equipment

